METHOD TO REPORT PERSONAL SECURITY INFORMATION ABOUT A PERSON

CROSS REFERENCES TO RELATED APPLICATIONS

[0001]   In relation to this utility application, applicants claim priority to earlier US provisional

application Serial No. 60/537,446 filed in the United States Patent and Trademark Office on

April 1, 2004, the entire disclosure of which is incorporated by reference herein.

STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR

DEVELOPMENT

Not Applicable

REFERENCE TO A "MICROFICHE APPENDIX"

Not Applicable

BACKGROUND OF THE INVENTION

FIELD OF THE INVENTION

[0002]   The present invention relates to methods of enhancing a person's security in their

information and person. In particular, the invention involves a method of providing a person

with multiple sources of information in one place to easily manage, respond, and understand

their security position.

DESCRIPTION OF THE RELATED ART

[0003]   After the attacks on September 11, 2001, people around the world have become more

aware of their personal safety. Personal safety is a concern for all people. Yet, as the world

grows more complex, the ability of ordinary citizens to manage their own safety has become

difficult or even impossible. People must receive, process, and respond to an inordinate amount

of information that relates to their safety and security. This information includes risks to the

person's physical safety, risks to the person's financial security, risks to the person's identity, and numerous other risks.

[0004]   To manage the information received, a person must interface with a multitude of entities. Currently, a person contacts each entity individually to obtain a specific item of information. An example of the current methodology is reflected in United States Patent Application 2002/0087460 to Hornung. In this patent, a consumer provides initial information. This initial information allows credit agencies to send notices, to the consumer, of changes in the consumer's credit history. The consumer may then respond to the changes. As with the other prior art, Hornung only provides information from one type of information – credit history. The current systems are based on fragmented solutions that are cumbersome and not easily operated.

[0005]   In addition, a person must often write or call the entity to obtain the information. These antiquated communication methods cause delays in receiving information. In addition, the information is presented in a form, whether a paper report or a phone message, that is hard to store and difficult to correlate with other information.

[0006]   Thus, there is a need to provide security information and other information more easily and more readily.

BRIEF SUMMARY OF THE INVENTION

[0007]   The present invention provides a method for providing an easily accessible and easily understandable source of information. The information provided comes from a multitude of sources and from a multitude of different information types. More particularly, the present invention provides a portfolio of web services delivered to a consumer through a website portal model. The web services help provide security information to a person. A person uses the

services to assess, alert, inform, and enable them to make the most effective response to safety concerns.

BREIF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWINGS

[0008]   FIG. 1 shows a block diagram of an embodiment for an information receiving system communicatively coupled to a plurality of information sources providing several types of information and to a user in accordance with the present invention.

[0009]   FIG. 2 shows a more detailed embodiment of the information receiving system in accordance with the present invention.

[0010]   FIG. 3A shows one embodiment of a method to provide multiple types of information to a consumer through a single source in accordance with the present invention.

[0011]   FIG. 3B shows one embodiment of a method to provide multiple types of information to a consumer through a single source in accordance with the present invention.

[0012]   FIG. 4A shows a second embodiment of a method to provide multiple types of information to a consumer through a single source in accordance with the present invention.

[0013]   FIG. 4B shows a second embodiment of a method to provide multiple types of information to a consumer through a single source in accordance with the present invention.

[0014]   FIG. 5A shows a third embodiment of a method to provide multiple types of information to a consumer through a single source in accordance with the present invention.

[0015]   FIG. 5B shows a third embodiment of a method to provide multiple types of information to a consumer through a single source in accordance with the present invention.

[0016]   FIG. 6 shows an embodiment of a method to secure an electronic device in accordance with the present invention.

[0017] To clarify, each drawing includes reference numerals. These reference numerals follow a common nomenclature. The reference numeral will have three digits or four digits. The first one or two digits represent the drawing number where the reference numeral was first used. For example, a reference numeral used first in drawing one will have a numeral like **1XX**, while a numeral first used in drawing four will have a numeral like **4XX**. The second two digits represent a specific item within a drawing. One item in **FIG. 1** may be **101** while another item may be **102**. Like reference numerals used in later drawing represent the same item. For example, reference numeral **102** in **FIG. 3** is the same item as shown in **FIG. 1**.

DETAILED DESCRIPTION OF THE INVENTION

[0018] The present invention will now be described in reference to embodiments of the invention presented in the description below with reference to the attached figures. However, the invention is not limited to those embodiments as one skilled in the art will understand equivalents that are within the scope of the invention. The scope of the invention is as defined in the claims.

[0019] **FIG. 1** shows a block diagram of an information receiving system **100** that may be used for the present invention. The information receiving system **100** includes two or more information providers **102**, an information receiver **104**, and a user or person (user electronic device) **106**. These entities may be communicatively coupled. Throughout this description, communicatively coupled may mean any type of electronic or electrical connection including, but not limited to, LANs, WANs, wireless LANs, Virtual Private Networks, cellular or wireless systems, or satellite communication systems. In the exemplary embodiment, communicatively coupled is a connection through electronic pathways via the internet.

[0020]   Information providers **102** are any entity, whether a business, organization, person, database, or electronic system that attends to personal information. Attending to personal information may include, but is not limited to, storing, modifying, or creating information about a person. The information receiver **104** is connected to at least two information providers **102**. At least one information provider **102** connected to the information receiver **104** provides personal information that is in a different class or is a different type of information than at least one other information provider **102**. For example, the information receiver **104** in the embodiment shown is connected to six information providers. Each of these information providers **102** provides a different type of information: identity information **108**, financial information **110**, location information **112**, legal information **114**, public information **116**, or computer system information **118**. The types or classes of information are not limited to these exemplary categories.

[0021]   Personal information can be any data that may describe or apply to a person or may apply to something with which a person is concerned. As explained above, personal information may be separated into separate classes or types of information. There may be one or more information providers **102** that send data that can be classified under one type of personal information. In addition, the classes of information may be categorized in more detailed classes than those types of personal information exemplified in **FIG. 1**. For example, a bank (like Wells Fargo or Citibank) and a credit reporting agency (like Experian, Equifax, or TransUnion) may both be considered financial information providers **110**. However, the financial information class of information may be broken into smaller categories. Two credit agencies may provide credit scores but not daily account activity and fall into the same class of information provider **102**. A bank may provide daily account activity on a person's checking account but not a credit

score. Thus, the bank and the credit agencies, while falling under the broad category of financial information providers 110, may fall into separate classes of information providers 102 because they provide information that the other information provider 102 does not. To determine if one information provider 102 is providing data in a separate the class of information, one skilled in the art should determine whether that information provider 102 presents one or more items of data that the other information provider or providers 102 do not provide.

[0022]   There are several examples of information that fall under the general information categories mentioned above. Identity information 108 can include any data that includes a physical or identification characteristic of the person. Identity information 108 may include, but is not limited to, use of a person's social security number, use of a person's driver's license number, use of a person's biometric information (including fingerprints, eye scans, picture, facial recognition, DNA typing, or other use of biometric data), or use of a person's military identification card. The financial dealings and financial position of a person generally encompass a person's financial information 110. Financial information 110 may include, but is not limited to, credit card usage, the creation of a new credit account, bank account transactions, credit reports, establishment of new financial accounts, retirement account transactions, or use or distribution of a person's credit report. Location information 112 may include information provided by an asset tracking system. These systems use GPS or other location finding devices to locate a person or object holding or using the device. The location is sent to an asset tracking system to process. Then the location may be sent to a user in a GIS format where the location is shown as a visual representation on a map. The location information 112 that may be shown includes, but is not limited to, the location of family members, the location of coworkers, the location of pets, the location of assets (such as cars, boats, motor homes, bicycles, etc.), the

location of city service vehicles (such as the police, fire engines, snow plows, etc.), the location of sex offenders living in the area, or the location of buildings (such as schools, hospitals, gas stations, etc.). Legal information 114 may include any information that affects or describes a person's legal status. For instance, this legal information 114 may include, but is not limited to, possible warrants, traffic tickets, parking tickets, summons, pending trials, or investigations into the person. Public information 116 is data or notices provided by civic or public safety organizations. Some examples of public information 116 may include, but is not limited to, homeland security messages, public address messages, meeting notices, pending votes on legislation or codes, reverse 911 messages, or school closings. Computer system information 118 is information about a user's electronic device or home computer system. Computer system information may include, but is not limited to, software updates available, virus update files, recalls, hardware failures, scheduled maintenance, or password updates. The examples given above do not encompass all possible information that may be managed by and in the present invention. Other information that would fall into the above categories and into other unmentioned categories is contemplated.

[0023]   The information receiver 104 may be a system that receives information from the plurality of information providers 102 and provides that information to the user 106. The information receiver 104 may be an electronic system or a software system. In one embodiment, the information receiver 104 would be a separate entity that would receive information from a plurality of information providers 102 and forward information to a plurality of users 106. Another embodiment would embed the information receiver 104 into a computer or electronic device operated by the user 106. In this embodiment, the user 106 would access the information receiver 104 by operating the hardware or software embedded in the user's computer system

106. No internet or other communicative couple would be needed between the user 106 and the information receiver 104. One skilled in the art will recognize the changes to the information receiving system, as will be explained below, that will be needed to create this embodiment.

[0024] A more detailed embodiment of the information receiving system 100 is shown in FIG. 2. This embodiment shows the information receiver 104 operating outside and independent from the user 106. In other words, the information receiver 104 is a separate entity that manages stores, consolidates, formats, and transmits the information to the user 106. As mentioned above, the information receiver 104 can be co-located or integrated with the user 106 or into the user's computer system. This alternate embodiment includes a software program or electronic device used at the user's home or in the user's computer to act as the information receiver 104. These two embodiments have similar components and the second embodiment will not be explained further. However, one skilled in the art will recognize the small changes that would need to be made to integrate the information receiver 104 into the user's systems 106.

[0025] Starting from the user 106 in FIG. 2, the present embodiment demonstrates that the user or the user's electronic device 106 may represent one or more of several devices. The security information may be reported to one or more of these devices 106. The electronic device 106 can be any device that may be communicatively coupled to the information receiver 104, receive information signals, and provide a message to the user 106. The message sent to the user 106 may be an audio, video, or text message. The means of transport for the signal is immaterial as the signal may include, but is not limited to, a wireless, cellular, telephone, internet, or satellite communication. Some of the electronic devices 106 that may be used in the present invention include, but are not limited to a user's home computer, a display device, telephone, a laptop

computer, a wireless or cellular phone, a personal digital assistant (PDA), a server, a mainframe or a hand held computer.

[0026] As some of the electronic devices **106** may not have direct access to the internet, the present invention may also include one or more service providers **220**. While the user may contact the information receiver **104** directly as shown, one or more service providers **220** may pass the information to the user **106**. For instance, the information receiver **104** may send the information onto a television signal provider, such as DirecTV, which would forward the information to the user's television. In other embodiments, the user **106** may access the information through an ISP. Still in another embodiment, the user **106** may receive information on his or her cellular phone via a cellular phone system or wireless system **222**. Wireless systems allow nearly immediate notification of the user **106**, regardless of the location of the user **106**. Other service providers **220** are contemplated and included in the present invention.

[0027] The detailed embodiment of the information receiving system **100** includes a detailed embodiment of the information receiver **104**. The information receiver **104** is communicatively coupled to the one or more of the electronic devices **106**. The information receiver **104** may include, but is not limited to, a computer, a computer system, a mainframe, a server, or other electronic system. The embodiment of the information receiver **104** can have several components or subsystems.

[0028] Components of the information receiver **104** may include one or more of, but are not limited to, an information portal **204**, a registration system **212**, an authentication system **214**, a permissions system **216**, an information vault **218**, a presentation engine **206**, or one or more databases **208**, or one or more communications engines. The information portal **204** is the interface between the user **106** and the information receiver **104**, which provides the electronic

connection between the information receiver **104** and the electronic devices **106**. This portal **204** may receive or send information from and to the user **106**. Information portals **204** can be routers, switches, and other internet or electronic communication systems that are well known in the art and will not be explained further.

[0029] The registration system **212**, authentication system, and permissions systems may be software or hardware systems. The registration system **212** ensures that the user **106** is allowed access to the information receiver **104**. The registration system **212** requires the user **106** to enter some of their personal information to gain access to the information data. Thus, the registration system **212** directs the presentation engine **206** to send information upon request by the user **106**. In addition, the registration system **212** helps establish what data the information receiver may receive on behalf of the user **106**. In other words, what types of information upon which the user **106** wants to receive updates. The registration system **212** may also be the initial program used to establish the user **106** as a client of the information receiving system **100**.

[0030] The authentication system **216** may be any system that verifies that the user has access to the particular information. For instance, the authentication system **214** may use a login and password protocol to prevent unauthorized access. Other systems and data may be used to authenticate the user's allowed access, such as biometric data or other information. Authentication systems **214** are well known in the art and will not be explained further.

[0031] A permissions system **216** may limit the amount of access to the user **106**. For instance, the permissions system **216** may only grant access to a user to his financial or public information. This permissions system **216** more accurately allows more than one user access to some mutually important data but not to each person's complete data. For instance, a wife may

have access to the husband's shared bank account but not to his retirement account information. Permission systems **216** are well known in the art and will not be explained further.

[0032] The information vault **218** is a data storage system. In an exemplary embodiment, the vault **218** is a database stored in some type of memory. The memory may be a RAM, ROM, hard drive, tape storage, optical disc storage, or other device. The vault **218** may be protected by one or more security measures. These measures may include password protection or encryption. The vault **218** stores all or a portion of the personal information obtained either from the user **106** or from the information providers **102**. The vault **218** may also store other information received for latter transmittal or for use in reports or presentations that may be made at a latter time.

[0033] The presentation engine **206** is the system or software module that receives, retrieves, consolidates, formats, or transmits the personal information. For instance, when a user **106** requests a credit report, the presentation engine **206** may retrieve the data, put it in an easily understandable format, and transmit it to the portal **204** for forwarding to the user **106**. The functions of the presentation engine **206** are described in more detail below.

[0034] The information storage **208** are the databases for the different types of information. There can be a single physical database with different relational or database substructures or there can be more than one physical database. In the exemplary embodiment, each physical database **208** shown stores or holds personal information representing a single type of information. For instance, the identity database may store information from identity information providers **108**. The financial database may store information from financial information providers **110**. Each type of data may be parsed out to a different database. There may be as

many databases as there are types of information that need to be stored. Databases are well known in the art and will not be explained further.

[0035] Each database **208** may interface with a communication engine **210**. The communication engine **210** may be communicatively coupled to one or more information providers **102**. The information providers **102** may include data providers and application providers. Data providers supply raw information; application providers provide access to or output from other processes, such as an asset tracking system. The connection to the information providers **102** may be made through different systems. Thus, there may be a communication engine dedicated to each type of information or dedicated to each information provider. This dedicated approach allows the interfaces, both as to type of communication system and communication protocol, to be specified for every information provider **102** (as is represented by the different solid or dashed lines in **FIG. 2**). Thus, there are as many communication engineers **210** as there are different communications systems or protocols. For example, one financial information provider **110** may provide XML files over an internet connection, while a public information provider **116** may provide Acrobat Reader files over a LAN. The present embodiment uses an internet connection, but the invention is not limited to that one embodiment. As the communication engine **210** depends upon the type of connection between the information provider **102** and the information receiver **104**, the structure and function of the communication engine **210** will differ. However, communication engines **210** are well known in the art and need not be explained further.

[0036] Finally, two or more information providers **102** are communicatively coupled to the information receiver **104**. Some information providers **102** may include, but are not limited to, credit reporting agencies (such as Experian or TRW), banks (such as Citibank, Wells Fargo, or

First National Bank), retailers (such as Sears or WalMart), civic organizations (such as Federal agencies, town councils, police stations, or school administrations), courts, or third party systems (such as asset tracking systems or computer software companies). One skilled in the art will recognize that the sources of information are as numerous as the information itself. Therefore, there are other information providers **102** that are included in the present invention.

Method of Receiving and Reporting Information to a User

[0037]   **FIG. 3A, FIG. 3B, FIG. 4A, FIG. 4B, FIG. 5A,** and **FIG. 5B** show embodiments of methods **300, 400,** and **500** for providing information in a single source from two or more information providers. While the embodiments show several steps, the present invention may have more or fewer steps than the embodiments presented. Many of the steps or processes in the methods are the same or similar. Thus, these similar steps will be explained only once. The differences between the three embodiments will be described in more detail.

[0038]   The methods all require that the information receiver **104** obtain initial personal information about the person **106**, connect with two or more information providers **102** that attend to personal information in two or more classes of information, receive one or more items of information from one or more of the information providers **102**, and report the one or more items of information to the person **106**. These steps will be discussed in more detail below.

[0039]   The information receiver **104** must obtain initial personal information about the person or user -- either initial identity information **304**, initial financial information **306**, or both. To protect the appropriate information, the information receiver must know that information. Some examples of the initial identity information may include, but is not limited to, a person's name, address, birthday, SSN, mother's maiden name, driver's license number, height, weight, hair color, or eye color. Some examples of the initial financial information may include, but is not

limited to, a person's bank account numbers, credit card numbers, loans outstanding, investment accounts, place of employment, or retirement accounts. The initial information helps determine which information providers will be connected with and identify the person or the items the person is concerned about. For example, to protect a person's social security number, the information receiver **104** must know and recognize the number. Obtaining **304** and **306** the information may be completed in various ways by various means.

[0040] The person or user **106** may provide the information to the information receiver **104** through the registration system **212**. Providing the data may include simply entering the information into the person's computer by the keyboard, mouse, or other man/machine interface and transmitting the initial information to the information receiver **104**. There may be other methods of providing **304** and **306** the initial information. For instance, the user **106** may scan their Social Security Card into a computer, the user **106** may store their fingerprint into the computer using a biometric scanner, or the user **106** may read the information to a voice recognition program, and the initial information can be transmitted to the information receiver **104**. In another embodiment, a software program may search the memory of a computer for electronic files that carry personal information. The software program may, for instance, scan the memory of the computer for nine digit numbers that may be social security numbers (SSN). The program may then ask the user **106** if this is their SSN. If the user **106** responds that the number is their SSN, then that number may be transmitted to the information receiver **104**. The means and method of providing the information may vary and may use several different methods.

[0041] After the initial information is obtained, the information receiver **104** connects **308** with a plurality of information providers **102**. Connecting with an information provider **102** means

both communicatively coupling with the information provider **102** and establishing a relationship with the information provider **102** where the information provider **102** agrees to supply personal information. One advantage of an information receiver **104** independent from the user **106** is that only one connection to each information provider **102** need be made for numerous users **106**. Thus, when the information receiver is already connected to the information provider, connecting may involve adding the new user to the list of personal information that the information provider **102** needs to monitor and to report. The information receiver **104** must connect with two or more information providers **102**. In addition, at least one of the information providers **102** must supply personal information in a different class than at least one other information provider **102**. For example, if one information provider supplies financial information then one other information provider must supply identity information, public information, or some other class of information. Again, the classes of information are not limited to these broad categories, but the classes may be separated into more detailed categories. It is possible to have two or more information providers supplying information in the same class of information, if one other information provider is supplying personal information in a separate class. For instance, the information receiving system may include connections to three credit agencies, Experian, TransUnion, and Equifax. However, the information receiving system would also be connected to a bank, like Wells Fargo, or to a public information provider, like U.S. Department of Homeland Security.

[0042] Once the connections are established, the three embodiments differ. **FIG. 3A** includes an embodiment where the information receiver **104** receives a notification or notice **310** about the person's personal information. Notice and notification are used interchangeably and are meant to mean the same thing. This notice may be forwarded **316** to the user **106** in its original

format or a modified format, as will be explained later. The notice may include a message that simply tells the user **106** that a change in their personal information has been made. In this embodiment, the user **106** would need to make a request as to what was changed and how it was changed. The information receiver **104** may answer the request or forward the request to the appropriate information provider or providers **102**. The response may be received by the information receiver **104** from the information provider or providers **102** and be sent to the user **106** containing the changed information. In another embodiment, the notification contains the changed information already, and the user **106** need not make a request for the information. In another embodiment, the notice is sent to the user **106** after an update **318** to the information. This situation may occur when a use of a person's SSN occurs. Rather than report each day whether a use occurred, the information receiving system **100** would update the user **106** on that particular day only if a use of the SSN had occurred. Another embodiment of the receiving information may include the user **106** sending a request to the information receiver **104** that is forwarded to the information provider **102**. The information provider and information receiver may send a response. This request and response situation may occur with the person's credit report. A request to view the credit report may be sent to a credit reporting agency. A response to that request, with the credit report attached, may be set back to the user **106**.

[0043] In other methods shown in **FIG. 4A** and **FIG. 4B**, the information receiver **104** may receive **408** a baseline set of personal information. The baseline set of information can contain all or a portion of the personal information about the user **106** that is stored by any information provider **102**. The information receiver **104** can send the baseline set of information to the user **106**. Then, the user **106** may verify the correctness of the baseline information by reviewing it for accuracy. If the information is incorrect, the user **106** may send a response to the information

receiver **104** or the appropriate information provider or providers **102** to correct the problem. Once the problem is corrected or if the baseline information is already correct, this baseline set of information may be stored in the user-specific vault or in the information type specific database.

[0044] Now, the information receiver **104** may periodically provide change information to the user **106**. A period of time elapses **410**. The duration of the period of time is immaterial and may be an hour, a day, a month, a year, or any other measure of time. In addition, the period does not need to be regular. Thus, the period need not be constant or consistent. Instead the period of the updates may vary such that it may be everyday for a week, then change to once a week for two months, and back to once a day for three weeks. Regardless, one or more information providers **102** can send a new set of personal information to the information receiver **104**. The information receiver **104** may receive **412** this new set of information. The information receiver **104** may make a comparison **414** between the new set of information and the baseline set of information. The information receiver **104** determines if any changes have been made **416** between the baseline set of information and the new set of information. If a change has been made, the information receiver can notify **418** the user of the change. This notification can be the same of similar to the notification mentioned earlier. Thus, the notice may include the change or simply bring the user's attention to the change. If no change has been made two things may happen. In **FIG. 4A**, the information receiver **104** may simply wait for a new set of information to be received. Thus, the baseline set of information never changes, and all comparisons in the future happen with the same set of baseline information. In **FIG. 5A**, the new set of information is established **502** as the new baseline set of information. Thus, each subsequent comparison happens with the last set of information received by the information

receiver **104**. The second embodiment creates a continually changing set of baseline information that can better track the user's changes in his or her information. These periodic updates may occur with the person's bank account data. For instance, every day the bank may send the account balance and the days charges and credits to the information receiver **104**. The information receiver **104** will compare the information to a baseline set of information and forward the changes to the user **106**. Thus, the user **106** obtains a periodic update of their accounts everyday.

[0045]   In all three embodiments in **FIG. 3A, FIG. 4B**, and **FIG. 5B**, the information receiving system **100** must report a notification **316** or report of a change **418** to the user **106**. Reporting the information includes methods of taking the received information (whether notices or new sets of information) and presenting it to the user **106**. The presentation may come in different formats that may include, but is not limited to, a visual presentation, an audio presentation, a report that may be printed, a warning message, or a tactile report (for instance, a Braille system for the blind). The presentation may be made on one or more of the user's computer, display device, wireless receiver, cellular phone, personal digital assistant, email address, website, telephone, or other device.

[0046]   In a further embodiment, the user **106** may want to respond to the notice or report of the change. The user **106** can determine whether a response is needed to anything in the notification **320** or anything in the report of the change **420**. The user **106** may send a message, email, Instant Message, phone call, or other transmission either to the information receiver **104** or to the information provider **102** directly. A message sent to the information receiver **102** may require the information receiver to determine **322** if the user's response can be addressed without forwarding the message to the information provider **102**. If the information receiver **104** can

address the response, the information receiver **104** fixes the problem **328** with the report, notification, or the personal information. If the information receiver **104** can not address the response, the information receiver **104** sends the response **324** to one or more of the information providers **102**. The information receiver may then monitor if the problem is fixed **326**. Once the problem is fixed, the information receiver **104** may wait for a new set of information or a new notification caused by an update to the personal information **318**.

[0047] **FIG. 3A** includes other steps in the process that may be included in any of the embodiments of the present invention. For instance, another step in the process may include securing the user's computer or electronic device **302**. A method **600** of securing the person's electronic device **106** is shown in **FIG. 6**. Securing an electronic device may include, but is not limited to, scanning for viruses **602**, searching for Trojan Horses **604**, establishing firewalls **606**, encrypting information **612** and **618**, or storing information **620** in a secure location. Scanning for viruses **602**, establishing firewalls **606**, and encrypting information **612** and **618** are well known in the art and will not be explained further. A Trojan Horse is a program embedded in the electronic device's **106** software that tracks the user's actions and reports those actions to an outside entity. Searching for Trojan Horses **604** is well known in the art and will not be explained further. Some information may be removed from the electronic device **106** and stored **620** in the vault **218**. As shown in **FIG. 6**, securing **302** the electronic device **106** may also include receiving the initial information **304** and **306**, then searching **610** and **616** the person's electronic device **106** for that information. If the information is found on the electronic device **106**, the information may be either encrypted **612** and **618**, moved to the vault **620**, or both. The information found on the electronic device **106** may also be password protected. Password protecting information is well known in the art and will not be explained further. Any of these

methods may be used alone or in conjunction and other methods known in the art may also be used to protect the personal information already on the electronic device **106**.

[0048]   Referring again to **FIG. 3A**, the information receiver **104** may format **312** the notices or personal information received form the information providers **102** before reporting the information. In some embodiments, the information receiver **104** may pass through the information received by the information providers **102**. However, most embodiments will require the information receiver **104** to format or change the style, protocol, structure, language, or some other characteristic of the information before transmitting the information to the user **106**. Formatting the information includes the information receiver placing the information into a presentation for use by the user **106**. In most embodiments, the information receiver **104** presents the information in a form that is easily understood by the user **106**. For instance, determining if an unauthorized account has been opened in the person's name may be daunting for the user **106**. The credit report must be reviewed, with the intention of eliminating all current, legitimate accounts. The information receiver **104** may have the current accounts stored and eliminate those entries. The formatted presentation would leave a listing of new accounts that are currently unrecognized. Thus, the formatting made the credit report more easily understood. One skilled in the art will recognize other functions that may be considered formatting the information.

[0049]   The information receiver **104**, as a function of the formatting, may also consolidate information. The information receiver **104** allows the receipt and reporting of single pieces of information. However, in most embodiments, the formatted presentation will include two or pieces of information from two or more information providers **102**. Thus, the consolidated presentation will incorporate the two pieces of information. For example, a credit report may be

consolidated with a person's bank statement. In this embodiment, the person may view what accounts exist along with their current activity. Consolidating information may also include combining pieces of information. Combining information includes using two or more pieces of information to create a new piece of information. For instance, a charge on a credit card may have an address and a time stamp. The charge may be shown on a map from asset tracking system. The location of the person's cell phone (and necessarily the person) during the time of the credit card charge may be shown on the same map. Thus, the person can decide if he or she was at the place when the charge was made or if someone has stolen his or her credit card or account number.

Example

[0050] John Smith purchases a DirecTV system and signs up for the DirecTV service that provides television programming provided by a satellite signal. As part of the content or programming offered by DirecTV, the satellite television provider **220** allows Mr. Smith to sign-up for a personal information security system. The service allows John to view the status of his personal information and helps him respond to issues with his personal information.

[0051] John selects the service and provides some initial information to an information receiver **104**. He gives some identity information, including his name, address, SSN, and his driver's license number. He provides some financial information, including his bank account numbers, his credit card numbers, and his retirement account numbers. John also provides a set of cellular phone identification information for his family's three cellular phones. The identification information is the number used to identify the cellular phone in the cellular system. Every cellular phone has an identification number that allows the cellular phone system to track the minutes called by the phone and identify that the phone belongs to a certain cellular service. Mr.

Smith gives one phone to his wife Jane and the other to his son Billy. In addition, John purchases a special dog collar with a dog tag that can both receive GPS signals and transmit those signals over the cellular phone system. He puts the dog collar on the family's pet named Fido.

[0052] DirecTV **220** sends Mr. Smith two set-top boxes **106**. These systems **106** include a hard drive, electronic components, and operating systems capable of operating a GIS System/Image Formatter program. In this example, the set-top boxes **106** have the regional maps of John's home state. After the set-top boxes **106** are installed at Mr. Smith's home, he can contact the information receiver **104** to authorize his system **106** to receive notices about his personal information. DirecTV receives the identification numbers from John's two set-top boxes **106**. These identification numbers specifically identify those set-top boxes **106** in the satellite television system. A customer number is given to John for his service. John's two set-top boxes **106** are authorized by downloading commands over the satellite transmission to the boxes with their identification numbers. The authorization programs the set-top boxes **106** to receive certain programming or content including the personal information. Channels usually describe an analog television tuning to a certain broadcasted frequency, but the term is used here to describe a certain signal of digital television that carries specific programming content – like HBO, CNN, ESPN, etc.

[0053] DirecTV provides the customer number to the information receiver **104** and establishes a format for the signals that will go to John Smith. In this example, DirecTV **220** will receive personal information from the information receiver **104** with a header that includes the service provider's TCP/IP internet address. The information receiver **104** then connects with several information providers **102** that attend to John's personal information. These information

providers **102** include Equifax, his banks, his credit card companies, his local fire department, his local police department, and an asset tracking service. The information receiver **104** then begins receiving data from the information providers **102** listed for John Smith.

[0054] One day, John begins to worry that Billy has been lying to John about some of his extracurricular activities. Billy has been telling his dad that he has been studying at the library every night for three hours. Unbeknownst to young Billy, John has given Billy a new cellular phone device with a built-in GPS receiver. The new phone sends GPS coordinates to the asset tracking service and are relayed to the information receiver **104** then onto John's DirecTV system where John can see Billy's location throughout the day. One evening, when Billy is assumedly at the library, John turns to the personnel information channel on his television system.

[0055] Billy, who is at the local arcade, has his cellular phone in his pocket. The cellular phone receives a transmission from several GPS satellites (or triangulates from several cell towers). The signals are interpreted into a GPS coordinate location. This location is formed into a message and a header. Every five minutes the cellular phone sends an internet transmission to the asset tracking service with the GPS coordinates. The asset tracking service sends the information onto the information receiver **104**. The message is reformatted to make it easier to send to John over the DirecTV system and to make it easily understandable. At a router, the message is transmitted to DirecTV.

[0056] Once received at DirecTV's internet router, the message is multiplexed into a stream of numerous location content messages. In essence, Mr. Smith's message becomes one of many similar messages all in the location content bit stream. This stream is multiplexed into the

satellite transmission and beamed to the satellite. At John's home, the personal information stream is demultiplexed from the satellite transmission by his two set-top boxes **106**.

[0057] The GIS System on Mr. Smith's set-top box **106** then determines where the GPS coordinate is located using the GIS database and files stored on the system. Once the location is determined, the GIS System obtains a map from the database and locates an icon, for instance a small boy for Billy, on the map. The GIS Image Formatter creates an image file, such as an MPEG file of the map and the icon. This file is sent to the display device.

[0058] On the display device, John Smith can see that his son is at the arcade. Also, through a similar process, the dog, Fido, is shown as located at the veterinarian's office with his wife, Jane. Both the wife icon and the dog icon are shown at the same place. An address may be given for the different locations. For instance, the location for his wife and dog may read, "Peterinarian, 1800 Main St., Smalltown, CO." Other information may be provided including, but not limited to, telephone numbers, directions to a location selected, advertising materials, the condition of the asset being looked at, or a direction or speed of travel for the asset. Also, John may decide to play back the location data from Billy from the past two weeks. The data may show Billy has been at the arcade several times when he told his father that he was studying.

[0059] While viewing the location information, John gets a warning notice on his cellular phone that a new credit account has been established in his name. John knows that he has not applied for credit in the past month. John heads to his personal computer and brings up the information receiver **104** website. He uses a login and a password to enter the website information portal **204**. Once on the website, John requests to see the credit account information.

[0060] The information receiver **104** stores a set of financial data for John in an information vault **218**. A presentation engine **206** retrieves the new credit account information from the

information vault **218** and sends a formatted page of information to the portal **204** and to John. John looks over the information and notices that the credit account was opened in another state. Immediately, John knows that someone has tried to steal his identity. John uses the website response tool to send a message to the information receiver **104** that the credit account has been created fraudulently.

[0061] The information receiver **104** forward John's message to the bank where the credit account was created. The bank quickly responds to the message by closing the account. Within a matter of minutes the new account was opened then closed. The bank lost no money and John's credit rating remains intact.